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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,596	02/12/2004	Katsuhiko Shinyama	SNY-044	3499

20374 7590 10/13/2006

KUBOVCIK & KUBOVCIK
SUITE 710
900 17TH STREET NW
WASHINGTON, DC 20006

EXAMINER

THOMPSON, MELISSA

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/776,596

Applicant(s)

SHINYAMA ET AL.

Examiner

Melissa B. Thompson

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 2/12/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/12/2004, 4/28/2005
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Hayashi et al. (U.S. Patent Number 5707761).

With respect to claims 1 and 3, Hayashi et al. disclose an alkaline storage battery with a positive and negative electrode, a separator, a hydrogen storage or absorbing alloy, an alkaline electrolyte, and a stabilizing agent in the positive electrode (column 2 lines 12-46 and Figure 1). With regard to claims 2 and 4, the stabilizing agent covers the cobalt hydroxide powder in the positive electrode (column 2 lines 11-21). The stabilizing agent can be lactic acid (column 2 lines 22-24), the hydrogen storage alloy in the negative electrode contains manganese (column 5 lines 15-20). The lactic acid dissolved in the electrolyte inherently forms a complex with manganese. Hayashi et al. include that the alkaline electrolyte is injected into the battery casing in column 5 lines 43-45, which means that the stabilizing agent covered the cobalt hydroxide particles is inherently contained in the electrolyte since the lactic acid dissolves in the alkaline electrolyte.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. (U.S. Patent Number 5707761).

Hayashi et al. disclose all of the elements required for claims 5 and 6 as stated in the rejection of claims 1-4 in paragraph 2 above, with the exception of sodium lactate. Hayashi et al. disclose the use of lactic acid to treat the cobalt hydroxide, in column 2 line 24, which is then immersed into the alkaline electrolyte solution (potassium hydroxide). With respect to claim 7 Hayashi et al. detail that 0.01 to 10 mg of the stabilizing agent are used per 1 g of cobalt hydroxide powder (column 2 lines 37-40) and that 5 g (column 5 line 9) of powder were used in the experiment to 54 mL of the alkaline electrolyte solution (column 5 line 43). Assuming that all of the stabilizing agent used is dissolved into the electrolyte solution, 0.05 to 50mg of lactic acid would be in the electrolyte or 5.5×10^{-4} mol of lactic acid in the electrolyte solution

It would have been obvious to one of ordinary skill in the art at the time of the invention to use sodium hydroxide instead of potassium hydroxide because they are equivalent alkaline electrolyte solutions in the art (MPEP 2144.06).

Art Unit: 1745

Substituting sodium for potassium would not affect the battery and would inherently place sodium into the solution of cobalt hydroxide and lactic acid. By combining the electrolyte solution with the lactic acid treated cobalt hydroxide would allow the sodium to combine with the lactate from the lactic acid and inherently provide sodium lactate in the battery. With respect to claim 7, the amount of sodium lactate in the 54ml electrolyte solution would be 6.2×10^{-2} mL to 62mL which would give a concentration of 1mg-1148mg per liter of electrolyte solution. The claimed range lies inside the range of the disclosed prior art and is unpatentable unless it produces a new and unexpected result, which is different in kind and not merely degree from the results of the prior art. (MPEP 2144.05)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa B. Thompson whose telephone number is (571) 272-2758. The examiner can normally be reached on 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Trainer Susy Tsang-Foster can be reached on (571) 272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1745

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MBT



SUSY TSANG-FOSTER
PRIMARY EXAMINER